

ABSTRACT OF THE DISCLOSURE

Apparatus and methods are disclosed for reducing noise leakage on the upstream channel from a cable modem. Noise leakage from cable modems, such as from a persistently enabled amplifier or other components in the 5 modem, can accumulate on an upstream channel and reduce the overall signal-to-noise ratio of signals sent to the headend. In order to significantly reduce such noise leakage and to provide termination of the cable plant in the modem when the modem is not transmitting data, a cable modem arranged to improve its isolation is disclosed. The modem contains an upstream transmitter having 10 a control line on which the upstream transmitter can emit a control signal. The modem also includes a switch component capable of being enabled and disabled by the control signal on the control line. The control signal from the upstream transmitter to the switch component enables the switch component thereby allowing a data signal to be transmitted on an upstream channel. The 15 switch component includes two switches. One switch is a series switch used to enable and disable the transmission of data . Another switch is a shunt for providing termination of the cable plant. The cable modem also includes an amplifier for amplifying the data signal from the upstream transmitter before being transmitted on the upstream channel.